11/25/2020

UPDATE: 3 BAT SPECIES STATUS ASSESSMENT (SSA)

WHY AN SSA?

LITTLE BROWN BAT

-Will inform discretionary review

NORTHERN LONG-EARED BAT

-Initially intended to inform 5-Year Review and Recovery Plan for species and now will inform court-remanded listing decision

TRICOLORED BAT

-Will inform 12 month petition finding

DATA CALL

The data call included soliciting relevant winter and summer bat data from partners (state, federal, tribal, and others) throughout the range of the three species, which includes 49 states and 4 countries outside the U.S. Partners submitted data to the North American Bat Monitoring Program (NABat) or directly to the Service. Although the official deadline has passed for submission, the Service will still accept relevant information and will strive to incorporate additional information to the extent possible. We acknowledge partners' overwhelming contribution to this effort through submission of relevant data and information.

CURRENT ANALYTICAL APPROACH

Our goal is to assess and describe the current status and forecast each species' viability (i.e., its ability to sustain healthy populations into the future). We assessed what factors may influence the current and future conditions for each of the bat species. The key influences identified include (but are not limited to): white-nose syndrome, mortality related to wind energy, winter and summer roost loss, hibernacula disturbance, exclusions and climate change. We also identified several potential catastrophic events that may impact the species in the future. Currently, we are including only WNS and wind energy mortality in quantitative modeling efforts for assessment of the current and future conditions for the species as information from these two influences is readily available at a range-wide scale. Other influences will be included in the overall analyses but will not be incorporated directly into models. As there is a large amount of variability with regard to data type and availability for the three species, we are using multiple models to assess population and species-level health across each of the species' ranges. Currently, we plan to include analyses of two broad types of bat data in analyses– both winter and summer data. Including both types of data will provide clarity for areas throughout the three species' ranges where data are limited or non-existent.

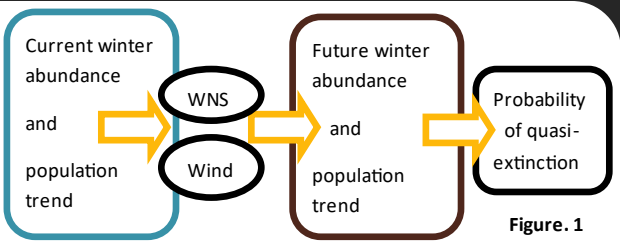

Figure. 1

For analysis of the current status for each species, winter data will be modelled using a count-based tool to assess winter abundance and hibernacula trend data. Outputs will feed into a demographic tool that considers impacts of WNS and wind development to predict future population abundance, trend, and probability of quasi-extinction (population collapse; Fig. 1). Summer data will be analyzed using an occupancy modelling approach to estimate current population trends that feed into the demographic tool and WNS/wind-related future scenarios to estimate future abundance, trend, and probability of quasi-extinction (Fig. 2).

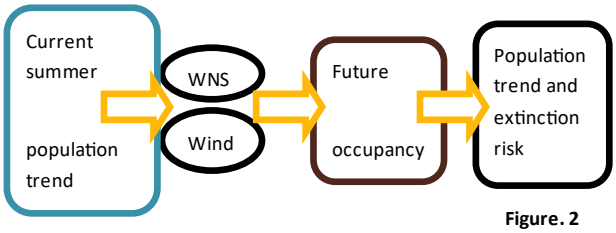

Figure. 2

TIMELINE

- Complete SSA Report Spring/Summer 2021
- Publish appropriate documents in the Federal Register by August 2022

THE TEAM

The Three Bat SSA team consists of a Fish and Wildlife core team, analytical team, and technical team. The analytical team includes partners from the Service, U.S. Geological Survey, NABat, and Bat Conservation International. The technical team consists of Service and state partners that have expressed interest in being involved with the process. If you are interested in the SSA, please contact project manager, John JaKa (jonathan_jaka@fws.gov) with any questions.